

AMERICAN BEE JOURNAL

46th Year

CHICAGO, ILL., FEB. 22, 1906

No. 8



Honey Exhibit of Chas. W. Sager,
of Belma, Wash.



Mr. Frank Stoffet and Apiary,
of Auburndale, Wis.



Dadant-Hive Apiary of D. Pantcheff, of Orhanie, Bulgaria, in Turkey.

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

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AMERICAN BEE JOURNAL.

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GEORGE W. YORK, Editor

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Editorial Notes and Comments

Government Bulletin on Queen-Rearing

"The Rearing of Queen-Bees" is the title of Bulletin No. 55, issued by the U. S. Department of Agriculture, Bureau of Entomology, Washington, D. C. (Price 5 cents.) It is written by E. F. Phillips, Ph. D., the man whose delightful personality made him so many friends at the late convention of the National at Chicago. It is gotten up in the usual excellent style of present-day Government documents, and is illustrated by 17 fine photo-engravings, all of them original.

In the nature of the case there is no great chance for originality, but it is a convenience to have given in compact form in these 32 pages, written in easy style, the steps necessary to rear queens according to the latest methods, including the Doolittle and Alley plan, cell-cups, nuclei, etc.

In the preface the author expresses the hope that the simplicity of the methods described will induce bee-keepers who have not already done so to adopt in the future the plan of replacing all queens annually, saying: "It is held by the best bee-keepers that it is necessary to restock all colonies with new queens every year." That leaves out of the list of best bee-keepers such a man as G. M. Doolittle, who not only does not interfere to change queens each year, but goes so far as to think it not worth his while to do so at all. Nor is Mr. Doolittle without company. Of those who think it best not to leave the work of superseding entirely to the bees, by far the larger part probably do so only every other year, and certainly some of them are successful men.

Under the head of swarming, it is said, page 9, "When the queens are about ready to emerge from the cells, the old queen and part of the colony leave to establish a new one." Which puts something of a strain on the word "about," as it is generally "about" a week from the issuing of the swarm till the emergence of the first queen.

The correctness of the work, however, is proven by the fact that these two points are perhaps the only ones in the whole work likely to be challenged by the reader.

There is just a possibility, however, that tradition has been held in too great veneration when under the head of superseding it is said, page 10, that when the first young queen emerges "an encounter ensues between the young

queen and the old one, and almost invariably the latter is killed." The old belief was that no queen would ever tolerate a rival, but of late years it has been found a not uncommon thing for mother and daughter to be found laying side by side. If a young queen may indulge her mother in a longer lease of life while that mother is still active enough to lay, is it not likely that cases are still more common in which the failing mother is tolerated after she is past service? Some might even have the temerity to ask, "Is there anything beyond tradition to support the belief that a queen ever kills her own mother?"

Those who have felt anxious for the character of queens where a large number are started, as by Cyprians and some others, will be reassured by the following on page 15:

"No fear need be entertained by the queen-breeder that races producing large numbers of queens necessarily produce poorer ones. Any one familiar with the prolificness of the queens of these races could not hold such an idea. There is no evidence that under these circumstances the larvæ are less well fed."

With regard to the second mating of queens, the following on page 28 is interesting:

"Frequent cases have been reported of queens which have mated more than once, and this probably accounts for irregularity in the markings of the offspring of some queens. It is claimed by some that obviously the first mating must have been unsuccessful, but there seems to be no ground for that view, and there is no reason to believe that both matings were not complete. There is no reason, whatever, so far as is known, why a queen can not receive a supply of spermatozoa from two drones, and some of the arguments to the contrary, with no basis of observation or knowledge of the anatomy, are not worthy of consideration."

The following nugget of wisdom from page 30 should be heeded by every bee-keeper who desires to increase his take of honey:

"The mere fact that mating takes place in the air, out of the control of the bee-keeper, is no reason why care should not be taken in the selection of drones which are allowed to fly in the yard. When breeding any race—Italians for example—it is not enough that all the drones be Italians, they should be selected as to honey-production of the workers, prolificness of the queen, or any other quality which is considered in choosing a breeding queen."

Pear-Blight and Bees

In some parts of the country a rather vigorous warfare has taken place between fruit-men and bee-men because the former accuse the bees of spreading that foe—pear-blight—which causes such havoc in pear-orchards. Indeed, the horticulturist looks upon pear-blight much the same as the bee-keeper looks upon foul brood. There is little doubt, at least in the minds of bee-keepers, that the bee is not so guilty in

the spread of the disease as charged; but, in any case, and especially as the pear is a honey-plant, it is of interest to know that there is an easy way by which the tree may be made more fit to resist the attack of the blight.

A very able paper on the subject was read by Mr. J. E. Johnson before the Galva Farmers' Institute, and published in the Galesburg Evening Mail. It would be out of place to give the whole of the paper here, but the nub of it is that a liberal application of wood ashes supplies the tree with those elements that enable it to resist to a great extent, if not entirely, the attack of the blight. Simple, and easily within reach of every one.

Mr. Johnson emphasizes his confidence in the remedy by his closing paragraph:

"I have trees that blighted 6 years ago, but by giving liberally of wood ashes they have not shown a single twig of blight since, and have borne several crops of nice pears."

Sweet Clover on the Farm

One believes more easily what one wants to believe, so when bee-keepers speak favorably of sweet clover as a forage-plant their testimony is likely to be received with a grain of salt. The following, from the National Stockman and Farmer, shows how it is viewed, not from the standpoint of a bee-keeper, but of a farmer:

Last summer there was some discussion of the value of sweet clover. Director F. E. Dawley, of the New York institutes, tells me that he has been seeding sweet clover in his pear-orchard for 9 years, sowing in the summer, harvesting the growth of hay in the fall, and plowing the ground in the spring. It is not palatable till cured into hay, but then it is eaten readily by his stock, and is nearly as rich in protein as alfalfa. There is a little more woody fiber in it. The variety used is the white sweet clover, the yellow making a ranker growth of less palatable feed. The growth should be harvested while tender, like alfalfa. The experience of Mr. Dawley confirms the belief of some others that sweet clover has a big feeding value, and live stock will learn to like it, and thrive upon it when properly cured. Some animals learn to eat this clover green, when the plants are young and tender, but this is unusual.

Alfalfa-Growing in New York

Alva Agee, the able correspondent of the National Stockman, tells in that paper about a miracle of man's making, which "consists in the doubling in value of many thousands of acres of land in an ordinary limestone blue-grass hilly country by seeding to alfalfa." Some pieces are of 40 years standing. It is in Onondaga Co., N. Y., the home of G. M. Doolittle and other prominent bee-keepers. In a region where 90 percent of the farmers are producing alfalfa, it ought not to be a hard thing to say whether the bees get any good from it. Until somewhat recently it was held that alfalfa yielded no honey east of the Mississippi. Will Mr. Doolittle, or some one else, kindly inform us how the matter stands in Onondaga County?

See Langstroth Book Offer on another page of this copy of the American Bee Journal.

A Queen-Bee Free as a Premium.—We are now booking orders for Untested Italian Queens to be delivered in May or June. This is the premium offer: To a subscriber whose own subscription to the American Bee Journal is paid at least to the end of 1906, we will mail an Untested Italian Queen for sending us one new subscription with \$1.00 for the Bee Journal a year. Or, we will renew your subscription to the American Bee Journal for a year, and send a fine Untested Italian Queen—both for \$1.50. Now is a good time to get new subscribers. If you wish extra copies of the Bee Journal for use as samples, let us know how many you want and we will mail them to you. Address all orders to the office of the American Bee Journal.



Miscellaneous News & Items

National Nominations.—The Fillmore Co., Minn., convention, met at Preston, Feb. 8 and 9. This Association are also members of the National Bee-Keepers' Association. They passed the following resolution at their recent meeting, and instructed their secretary, Mr. P. B. Ramer, to send it in for publication:

Resolved, That the nomination for officers of the National Bee-Keepers' Association be made by a referendum vote, the man having the largest vote being considered the nominee of the Association.

Honey Exhibit of Chas. W. Sager.—This, as shown on the first page, was an attempt to engrave from a very poor photograph. It will be seen how unsatisfactory the result is. Accompanying the picture came the following:

I send a picture of the exhibit made by Mr. Sager at the Inter-State Fair at Spokane, Wash., which lasted from Oct. 9 to 16, 1905. Mr. S. is standing by his exhibit. He was fortunate in winning the blue ribbons on both comb and extracted honey at the State Fair, and the blue ribbon on comb honey, and red ribbon on extracted, at the Inter-State Fair.

GRACE W. SAGER.

Frank Stoflet and Apiary.—When sending the picture reproduced on the first page, Mr. Stoflet wrote as follows:

I send a picture of my apiary and myself. There are 85 colonies in it. I have another apiary of 50 colonies. The house seen in the picture is where I used to winter bees. It has double walls, with 2½ feet of planer-shavings between. Owing to the walls being too thin I could not maintain a high enough temperature, so I abandoned the use of it as a winter repository. I now winter the bees in a cellar, with far better results.

The picture is some of my own photography.

FRANK STOFLET.

The Apiary of D. Pantcheff, of Orhanie, Bulgaria, in Turkey, appears on the first page. Mr. C. P. Dadant met the owner of this apiary at the home of Mr. Bertrand, the well-known editor of the *Revue Internationale D'Apiculture*, during his trip to Europe a few years ago. Mr. Pantcheff was in Switzerland visiting one of his intimate friends—a student at the University of Lausanne. He then informed Mr. Dadant that the Dadant hive and methods were well known among the educated classes in Bulgaria, and that he himself has several apiaries of Dadant hives. The photograph was later sent by Mr. Pantcheff to Mr. Dadant. The hives shown in it are all Dadant hives.

A Mistake, there appears to be, as some of our subscribers seem to understand that they can get the American Bee Journal through the National Bee-Keepers' Association at 75 cents a year. This is entirely wrong, as we have not made such price to the National. We do not know how the report was circulated, but it certainly is a mistake. One subscriber wrote that unless he could get the American Bee Journal at the 75-cent rate as offered by the National Association, he should feel that we were discriminating against him. We publish this paragraph so that there may be no further misunderstanding concerning this matter. So far as we know, the National Association is not a subscription agency, and so does not handle subscriptions for any of the bee-papers. It has an entirely different field to work in. We do not think it has ever quoted any 75-cent rate for the

American Bee Journal; if it did so, it was without any authority from us. We are satisfied, however, that there is a misunderstanding. We trust this explanation will be satisfactory.

An Example Worth Copying.—Wm. Stolley, of Grand Island, Nebr., is one of the staunch friends of the American Bee Journal. On Jan. 29 he sent us a new subscription, and among other things wrote as follows:

EDITOR YORK:—I hope that every subscriber for the "old reliable" American Bee Journal will send you this year at least one new subscription, and thus show, *practically*, their appreciation of it. I have done this for a number of years, and wish I had been able to do more.

WM. STOLLEY.

If every one of our present subscribers would follow Mr. Stolley's good example within the next 30 days, of course our list of readers would just be doubled. Then if another year it could be repeated, we would have the largest list of real bee-keepers to a real bee-paper that there is in the world. Surely this is worth striving for.

But there may be some of our readers who could not possibly get even one new subscriber, and yet perhaps in such cases they might make a present of a year's subscription to some bee-keeper friend in some other locality or State. After the first year, very likely such new subscriber would renew, and perhaps himself secure another new subscription for the American Bee Journal. If it could be worked something like the chain-letter system that was in vogue a few years ago, and if it would prove as successful as was that plan of increase, it would be a great thing, not only for us, but for all the readers of the old American Bee Journal. For if we could have several times as large a list of regular subscribers as we have at present, we could add a number of new features and improvements that would be possible with the increased receipts received from subscriptions and advertising. In the meantime, however, we mean to give the biggest and best dollar's worth of bee-literature every year that we can possibly afford.

Please don't forget Mr. Stolley's good work for the American Bee Journal. We hope as many as possible of our present subscribers will see if they can not "go and do likewise."



Contributed Special Articles

Sections, Separators, Supers and Section-Holders

BY F. GREINER

WHILE we were casing our comb honey last fall, many things suggested themselves having close bearing on our pursuit, and it might be well, and of benefit to others, to jot these down on paper.

Our attention was first drawn to the sections themselves. We had bought sections of an untried firm last season. We thought we were saving a few cents on a thousand, but found that we had made a very big mistake. In the first place, the lumber used for the sections must have been green, for they were minus that glossy finish which we have admired in sections bought of late years from the large manufacturers. The outside part of the sections was fuzzy, and it was impossible to touch them without leaving "finger-marks." Dust and dirt adhered to them very tenaciously, and a sandpapering machine would have come very handy to improve their appearance.

After casing this honey and comparing it with honey in sections from the previous year, we have resolved not to be too saving again when purchasing our supply of sections.

Before giving our order to a new firm we should want to see their work, and insist on a guaranty that the sections sent us must be No. 1 in every respect.

It is our aim to purchase our supplies early, in order to obtain the greatest discount, but I would not want to send the cash for the whole amount with the order, when ordering from some new firm. Other faults of the sections I will not mention here at this time.

I have two different kinds of sections in use—the 4x5 plain, and the 4x5 bee-way. In taking the honey out of the supers and scraping the sections, I found I could handle more of the no-bee-ways in a given time, other conditions being the same. Still, this difference did not amount to much. Generally speaking, I prefer the bee-ways, but have more of the no-bee-ways in use. I have decided not to increase my stock of no-bee-way supers.

FENCES VS. PLAIN SEPARATORS.

I have failed to discover any difference in favor of fences, as against plain, solid separators when both are of wood. It is my opinion that if we wish to enjoy any benefits in this line we will have to adopt a separator that is all "hole," or practically so. The Betsinger wire-cloth separator, with $\frac{1}{4}$ -inch mesh, would perhaps fill the bill better



Part of F. Greiner's 1905 Honey Crop.

than anything else in use. It is my opinion that this separator will be tested and adopted by many comb-honey producers in the near future. It is more expensive than any other separator, but it is enough better to justify the extra expense. If any manufacturer had pushed this separator as other more inferior ones have been pushed of late years, I believe that it would take the lead to-day. A wholesale way of manufacturing it would, in all probability, reduce the cost very materially. I hope that time will soon be here.

SUPERS OF VARIOUS KINDS.

Which super is the best, the most convenient, and gives the least trouble in the bee-yard and in the honey-house? This question has impressed me as one of very great importance. It comes up again and again during the time of casing honey. It seems a matter difficult to explain, that bee-keepers use—continue to use—such unsatisfactory comb-honey supers as are sent out universally by the manufacturers. I should think they would "bolt." I have numerous different supers in use, not only one or two of a kind, but 20, 30 or 50 of a kind. This gives me an opportunity to test each one's merits.

We may divide the different supers into three classes. One class protects the section all around; the second class leaves the tops unprotected; the third class protects only the sides, but leaves the tops and bottoms exposed to the bees. Some of these classes may be subdivided again, for there may be a bee-space at the ends of the section-holders, or the sections may be close-fitting. Supers with the latter kind should be rejected to begin with, for that end of the section which touches the outside case is seldom as well finished as the other end. The illustration shows one section which was taken from such a super, and any one can easily tell which part of the same came next to the outside of the section-holder and outside of the case. Had there been a bee-space between the section-holder and super wall, this section would have been sealed clear to the wood, and all around. (See picture on next page).

That super which gives us the cleanest sections when

filled, gives us the least trouble in removing the filled sections from it, and can not be easily disarranged when handling it in the bee-yard before or after going on the hives—in other words, may be handled roughly without serious results. That super suits us best, provided perfect honey is produced in it.

Candidly, now, is there a super offered for sale by any of our manufacturers to-day that can make such claims? Not that I know of! The very best of them have a section-holder with no top-bar—many have no bee-space at the ends and around the holders. Some use a section-holder which contains only 3 sections, going the short way of the hive. This latter arrangement brings one end of two-thirds of the sections in close contact with the super walls. If the section-holder were the long way of the hive it would hold 4 sections. This arrangement brings one end of only half of the sections in close proximity to the super-walls, and is the best we can do.

With a bee-space at the end, and perhaps a double bee-space at the sides, we have a super that will be free from the defects mentioned above, and will give us sections uniformly filled and sealed. If in addition we give the section-holders a top-bar, and thus keep the tops of sections clean, it will seem to me that we need not seek for anything better. Such a super would be called a wide-frame super, and is the most practical of anything I have ever used or seen, or have seen described.

Some bee-keepers who have had no experience with wide frames are afraid there may be difficulty (?) in taking the filled sections out of them. If they had had any experience, they would have found it a great deal easier than to take the honey from T-supers, and just as easy as taking the sections out of the section-holders with no top-bars. There is no super on earth that gives us more trouble than the T-super. I find it impossible to "get the sections out" without setting a large percent to leaking. I have used them for 20 years, and have followed the instructions given by many on how to empty a super, but have not yet learned the trick, or a better way than carefully to remove one section after another with the super right side up and follower removed. The difficulty lies in loosening the section from the T-tin, which can not always be accomplished without cracking the honey. I can generally remove the honey from 4 wide-frame supers in less time than from one T-super, and do it without breaking or cracking a single section.

The cleaning and scraping is equally more expeditious with sections from a wide-frame super. Dr. Miller, some time ago, claimed in this Journal that the bottom-bars of wide frames were apt to sag slightly, and the bees then had a detestable way of crowding bee-glue into the space between the top of the section and the top-bar of the wide frame. This shows that Dr. Miller has had some experience along this line. It must be he has used wide frames, and the wonder is that such an insignificant matter could induce him to abandon the wide frame for the most worthless super ever invented. If I were bound to use the T principle, I would at least abandon the long T tins, and, instead, rivet little \perp tins to the separators, as shown in the picture herewith. This arrangement makes the separator the supporter of the sections instead of the T-tins, and reduces the bearing surface between the supporting tin and the wood of the sections to a minimum, and also reduces the number of pieces of the super. There is no difficulty whatever in removing filled sections from such a super.

I have some 25 or 30 on hand, which I would sell cheap to Dr. Miller, or to any other man, together with that many more regular style T-supers, for I have decided not to use them again. They hold 24 no-bee-way 4x5 sections, and are well painted. I object to them because they are so frail, and have to be handled so very carefully or they are out of order before we know it.

The regular T-super is still more objectionable on account of the space between the rows of sections at the top of the super, caused by the T-tin at the bottom. To fix things right, thin strips of wood must be inserted to prevent an undue amount of propolis being run in between the ends of the sections. But as every one well knows, the principal drawback to these supers is that the tops and bottoms of the sections become very badly soiled. Only a sandpapering-machine can ever make them presentable. The sections from such supers as have a bottom-bar for them to rest on, at least keeps the bottoms clean, and by casing bottomsides up, our cased honey presents a tolerably fair appearance. But the T-super does not give us even this advantage. The tops and bottoms are both badly besmeared, and when the honey is cased, even after we have done a big lot of scraping, it looks unsightly.

Let Dr. Miller examine the two pieces of sections which I mail him to-day, and tell us which he would rather clean up—the one from the T-super, or the one from the wide-frame-super. All my sections from T-supers and open section-holders were as badly besmeared last year as the one I send him. The photograph shows how badly this is.

The sections which come from the wide frame supers may have little ridges of bee-glue along their edges, but this may be removed very easily with a few strokes of a knife.

The sagging of the bottom-bar of a wide frame holding 4 sections is of very little consequence, and may be almost



Supers used by F. Greiner.

wholly prevented by a heavy bottom-bar. Those I use are too thin, as they are only $\frac{1}{4}$ -inch thick. I should now make the top-bar and bottom-bar of equal thickness, but not more than 5-16 thick. I would not expect very serious trouble with such; in fact, I don't experience very much trouble with them as I have them now. Occasionally I have to take off a bottom-bar and turn it over before nailing it on again.

A serious fault of the fences is that they are not a permanent fixture. Many a time the bees widen the spaces the first year to such an extent as to cause the finished honey to show that "wash-board" appearance. Fences should be made of beach or maple wood—hard wood, at any rate; then they would last; I have fences in my rubbish heap which were nearly eaten up by the bees. Many others have lost the little cleats. It seems the furniture-glue is not as strong as the bee-glue. These things do not tend to bring fences into greater favor with me.

In constructing a wide-frame super, it is a question whether the separator should be nailed to the frame or should be a separate fixture. Each method has its advantages. If the wide frame can be filled with sections before putting in the foundation, it would be an advantage. Mr. Betsinger manages precisely as Mr. Getaz describes on page 843 (1905), filling the sections with foundation, but has the advantage of handling them in fours. Even should his sections not fold exactly square, they are held in shape by the wide frame, and by having the 4 blocks of wood nailed down on a board just right, the wide frame with its sections may be laid on them, and the foundation adjusted and fastened on by use of melted wax. This way of fastening foundation into sections may appear meritorious to some. I have, for the sake of the experiment, tried it, and luck would have it that the so-produced honey found its way into the culinary department of our house. A heavy hatchet was required to knock it out of the sections, and I don't doubt Mr. Getaz in the least when he says that such honey may be shipped anywhere; but I timidly ask, Do we produce honey for the Hot-tentots in South Africa, or for the civilized people of America? I advise those who can not produce an *unobjectionable* article for human food profitably, would better get out of the business.

At present prices we can produce comb honey without comb foundation at a profit to ourselves, and it will not be necessary to depend upon the trade "among the gilded parasites of high finance," as Mr. Atwater puts it in a November bee-paper. If we can not supply all the comb honey that is wanted, extracted honey, I fancy, will come to our rescue, and the masses would only be the gainers. Let us produce a pure, wholesome article of comb honey, or not say any more about adulteration of syrups, honey, or other food products.

Ontario Co., N. Y.



Southern + Beedom +

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

Sweet Clover (*Mellilotus alba*).

For years I have been interested in the matter of growing sweet clover as a forage crop for bees. In many places of the South there are dearths of honey, and long ones, sometimes, and in some localities, between the spring and fall flows, which are very serious, the bees sometimes starving during such dearths unless feeding is resorted to. There are serious objections to having to feed at these times, too, as unnecessary brood-rearing results, besides using up a large quantity of food. A good many different methods have been tried, but all are a great deal of trouble. If enough stores are left in the hive after the spring flows to last the bees through the dearth, it is all used up in breeding, and before the dearth is over the stores are gone. A practice that has worked quite well has been to save this amount of stores in combs away from the bees. That is, to keep combs of sealed honey from the spring flows stored away in the honey-house. These combs are then given one at a time at intervals during the dearth as needed. But this takes an immense amount of labor, and trouble from the wax-moth to the stored combs is a serious one in our warm climates. Then, it is often a hard matter to give combs at the right time without stirring up robbing.

After visiting some of these localities, and consulting with bee-keepers there, I have come to the conclusion that it is *very probable* that this trouble of tiding the bees over these dearths can be accomplished by planting suitable forage crops for them, that will come into bloom and yield nectar during the time when nothing else does. To take this matter up properly it was, of course, necessary to find when the spring season closes and the dearth begins, the length of the dearth, and the opening of the fall season. This differs somewhat in different sections, and in different States of the South, also depending very largely upon the existing flora. For an average, however, I believe we would not go amiss very far if we take the following dates:

The spring flows or season closes about June 1. Then the severer period for the bees sets in, and there

is absolutely nothing for them to do. This lasts, in the cotton-growing belt, until cotton begins to yield nectar—about July 15 to Aug. 1. From then on to frost cotton yields, sometimes giving a good surplus. Fall flowers also yield, especially if sufficient rains have prevailed.

It will be seen from the foregoing that there is a period of about two months of absolute idleness, and this during the warmest part of the season when bees could be most active. The bees do not realize the danger of starvation ahead of them, and keep on breeding and use up all the stores long before the dearth is over and cotton begins to yield.

In my calculations I found also that the blooming period of sweet clover just covered the above gap. It begins blooming about June 1 in most localities, a little earlier in others and more protected situations, and depending also upon the season and weather conditions. Yellow sweet clover (*M. officinalis*) is said to be earlier than the white variety, and I also got this information from M. A. Gill, of Colorado, while visiting his apiaries, where I saw it in full bloom. Either variety, however, would cover the period of the dearth, as the *mellilotus* blooms until frost in favorable seasons, while it is in bloom during June, July and August in others.

Sweet clover grows well after it has a start, and waste-places, even in the poorest soils, could be planted to such forage crops for bees, especially since there are thousands upon thousands of acres of just such waste land in our Southern States. Our fence-rows would be worth thousands of dollars to us if sweet clover grew where rank weeds of no use whatever to us grow now. Besides, this would create a yield of nectar just at a time when it would be most valuable, and when nothing else is in bloom.

Some people seem to fear it as a noxious weed, hard to kill out of a field, and that it spreads rapidly. This, however, I find not the case with all the plots planted at our Apiary Experimental fields. A single plowing killed it just as easily as any of the weeds that grew with it, and there is little danger of it spreading out of bounds. In fact, I could not get it to spread fast enough for me. The plant grows well in most of our black land sections, and has been tried at several places. I have seen it grow luxuriantly on dry, doby hills, too.

Sweet clover honey is good, quite light in color, and of very good flavor. The bees work busily on the bloom from early till late.

This matter should be taken up and studied by our Southern bee-keepers. Our annual yield could be greatly increased.

SWEET CLOVER AS FORAGE FOR STOCK.

It has often been repeated that stock and cattle disliked sweet clover, and that it was a *worthless weed* and not worth anything as a forage crop. In this the people were evidently mistaken or they "didn't know," for I have seen animals eat it quite readily, both in pasture and as hay. The following by J. A. Green, in *Gleanings*, is so well to the point that I give it here; he seems to be criticising Prof. A. J. Cook for this same reason:

"Prof. Cook's remarks on sweet clover, page 1121, should perhaps teach me to have a little charity. In my own experience, those who have talked that way have generally been lacking in the faculty of observation, and I have usually been able to show them that they were mistaken. For instance, a cousin once came to visit us. The talk turned upon sweet clover, and she said: 'But it is such a perfectly worthless thing. Nothing will eat it.' I at once invited her out to the barn, where her horse was eating sweet clover hay with a very evident relish. He had never had any before, but he ate it greedily; and after he was hitched up to go away he paid his respects to a



WHITE SWEET CLOVER.



YELLOW SWEET CLOVER.

tempting wisp of sweet clover hay in a way that showed plainly what his sentiments were. I have never had a horse or cow that would not eat it readily without any teaching, especially when made into hay; but I know that some stock do not take to it readily at first. This does not prove that it is not good forage. Cattle feeders tell us that stock just brought in from the range often refuse to eat corn, and they sometimes have considerable trouble to get them to make a start on it; yet I never heard any one argue from this that corn is distasteful to cattle, or that it is not good feed for them."

Watch Your Colonies

Keep your eyes or ears on your bees, or the colonies, anyway. It is a good time to watch your colonies for stores now, especially since brood-rearing is under way.

Improvement of Stock

Improvement of stock is a great thing. If our bee-keepers would only spend half as much time over this question as they do over some other things, the whole bee-keeping world would be better off. Better bees, with better bee-keepers, of course, will mean increased yields—larger returns, and greater profits.

New blood should be procured and introduced into the yards. Some good breeders, and then some good breeding, would make it possible to produce honey-gathering strains that would be profitable to their keepers.



Canadian
Beedom

Conducted by MORLEY PETTIT, Villa Nova, Ont.

Frame-Spacers and Spacing Frames

DEAR MR. PETTIT:—Your words on spacing frames, in the American Bee Journal, interested me, as nearly everything on that subject does. In regard to the so-called "Alpaugh" spacing device there illustrated, the only new idea in it is the form of the end-spacer, and combining the end-spacer with the pin under the projection of the end-bar. Spacing by notches in the rabbet, and a pin (headless nail) under the top-bar projection was described in the American Bee Journal years ago. The scheme might be excellent, but when we put on the extracting supers we can't afford to use close spacing, so we use 8 combs in a 14 $\frac{1}{4}$ -inch space—never more than 9; then our "advantageous" spacer is useless, and worse—the frames are now raised perhaps one-sixteenth of an inch or more, as the wires no longer rest in the notches; and if we don't use a quilt there is not sufficient bee-space over the frames, and you know what that means.

If it were perfectly practicable to use the same spacing in both supers and brood-chambers, that would really be an excellent device, but inferior to either staple or Hoffman frames, in that one can not shove over two or more frames *en masse*.

How you manage to "take no thought of spacing" in the extracting supers I don't see, unless you have staples driven so as to make a wider spacing in the supers, and then never interchange frames above and below. I think the Hoffman frame superior to any of these make-shifts.

Meridian, Idaho.

E. F. ATWATER.

It would be interesting to know the exact date when spacing by notches in the frame-rests and pin under top-bar lug was first described in the American Bee Journal, and by whom. Mr. Atwater's objection to its use in the super can be overcome by having the super-frame rests notched for wide spacing.

The main objection I see to the system is the next point he mentions—"that one can not shove over two or more frames *en masse*." Barring that and the necessity sometimes to space close in the super, I consider it the best spacer I know of.

My "taking no thought of spacing in supers" means, in one yard combs with staples driven for wide spacing, and no exchanging with brood-chamber combs; in other

yards it means, close spacing in the super, which is objectionable. We can only choose the system with the most advantageous and fewest objectionable features. The spacer shown by the A. I. Root Co. at the National Convention would, I think, be better than staples or Hoffman frames.

It materially strengthens the lug of the top-bar, which more than counterbalances the danger of the metal to the honey-knife. It does not provide for propolis like the Hoffman, and allows combs to be handled in bunches better than staples. It does not provide for wide spacing in the super, unless a different size of spacer be used on the super-combs. With the latter, super-combs could be put in the brood-chamber occasionally, and probably as often as that should be done. So, all considered, and judging by theory based on general experience, as I have never used the new Root spacer, it may be a good thing.

Distributing the Caucasian Bees

EDITOR CANADIAN BEE JOURNAL—

Dear Sir:—Unwisely, I think, and so do many others, the Department of Agriculture, Washington, D. C., is arranging without a thorough test to distribute the Caucasian bee. Mr. J. B. Hall condemns them strongly, and says after 23 years' effort to stamp them out their objectionable traits at times crop up in the apiary. Would it not be well for Canadian bee-keepers to suppress their curiosity and let the United States distribute them. We can wait a season, and may keep ourselves from introducing at different points through the country what may be as objectionable as the English sparrow.

R. F. HOLTERMANN.

So say we all.



Our Sister
Bee-Keepers

Conducted by EMMA M. WILSON, Marengo, Ill.

Breeding from the Best—Stimulative Feeding

DEAR MISS WILSON:—Bee-keeping is "so full of a number of things," and so many interesting points have been raised in the American Bee Journal lately, that one hardly knows where to begin or end in writing. However, as you are always so willing to answer our questions, perhaps I would better begin by answering yours (page 903—1905).

I began in the spring with 31 colonies, and packed away 46 in winter quarters at the end of the season. A super of chaff goes under the cover of each hive, and I have small movable sheds to shelter 4 hives each, which I put over them, and pack the whole well with straw.

The bees were splendidly strong in the early summer, but, as you know, the Colorado honey crop was anything but a large one last year, and, with the best intentions, my bees gathered only 300 pounds of comb honey fit to pack, and I rendered down a lot of culls, which gave me about 50 or 60 pounds of extracted honey, which my misguided family always prefer to the finest "comb."

I find the very best way to do this is to put the comb, after cutting them from the sections, into a white enameled pan, which then goes into a solar wax-extractor. If the sun is hot enough it will melt right through, and the vat will cool in a cake at the top in the evening. A slit can be made at the edge of the vat, and the honey can then be poured from under it. It will be found so clear that it will need no straining through cheese-cloth, and the sun seems to give it an extra-fine flavor.

Now for a few of the "points" I have been noticing lately in the Journal. So much has been written about Italians *vs.* blacks, that I will give my experience. I have my figures as nearly correct as I can, but in some cases it was a little hard to judge what each colony did. I had, sometimes, to let one colony cap what two or three had helped to fill.

Getting 360 pounds from 31 (spring count) colonies, gives an average of less than 12 pounds a colony. But of this the colony ruled by the 6 golden Italian queens I bought the previous fall, produced 193 pounds, or 32 pounds per colony. The remaining 25 colonies of "mixed" bees made

only about 167, or less than 7 pounds per colony. Now, 32 pounds is not much for a colony to store, but it was more than 4 times the amount the others stored. In addition, the Italians filled up their hives well with winter stores, which is more than some of their neighbors did. This leads me to a second point—feeding. I am sorry you and Dr. Miller had so much trouble with your unfinished sections, but I am glad you told us of it, for if sometimes the bee-keeping chieftains can not get their bees to work their will, we humble followers need not always get discouraged, and think, "I suppose it is my own fault somewhere," when our bees persist in doing the very opposite of what we want or expect of them.

I had just the same trouble as you had, but with me it was more serious, for I not only wanted to get the sections cleaned out, but to feed the light colonies. I also had a number of brood-frames containing 1 or 2 pounds of honey I wanted them to take out, but nothing would induce the bees to carry it down. I tried giving the supers *under* the hive-body, but neither would they carry it *up*. I then gave them extracted honey, and I gave them syrup, but neither would they store that. I fed it not, and I fed it cold; I fed in the warm part of the day, and I fed at night, but with the hives I wanted to fill up most it was no use at all. Anything left in the open—a few drops spilled, or the stick I mixed with—would be black with bees directly; but except in the case of one or two colonies they would not take from the feeder.

I made the syrup thick, as recommended in the Bee Journal of Oct. 5, 1905, and mixed it smooth and clear in the bread-making machine, which mixed it beautifully. Finally, I had to buy a number of full extracting combs from a neighbor to get enough for them to winter on.

Observe, I said "to winter on." But there are several still too light to stand the strain of brood-rearing in the spring, and I shall have to feed them in some way about March.

We have had several warm days lately, and the bees have been flying freely about, and they are usually quite ready for bran and flour by the middle of February. I have noticed that the elms are usually out about the first of March, with the bees thick upon them, and the box-elders are only a little later.

I never quite understand what is meant by "stimulative feeding" in the spring. How would you feed under these circumstances? Would the syrup I made in the fall be right then, or should I make a thinner one? I have never had to feed syrup before at all.

I use 10-frame hives, and leave all the frames in all the summer, and, in addition, I have always tried to get a number of extra combs filled with sealed honey to enrich the poorer colonies in the spring.

I know this is not the most "advanced" method, but I do almost the entire work of the apiary by myself; and if there is a little less honey in the packing cases there is also less handling of hives and combs, and less anxiety about winter stores.

I have another favor to ask of you: In the American Bee Journal for 1903, page 491, there is a letter signed by Dr. F. L. Peiro on feeding bees with "crushed white mulberries." He speaks of a previous article on the subject, but I did not take the Journal till that year. We have a large number of mulberry trees, both purple and white, and the bees certainly get either pollen or honey from the blossoms, and perhaps both. I tried crushing the fruit and putting it near the hives, but the bees would not take it.

Would it be too much to ask you to look this up, and let me know how the fruit should be prepared? If it is really as good a bee-food as he thinks, it is a pity not to use the quantity of fruit we have every year. COLORADO.

There is at least one member of our family that will agree with your misguided ones, that extracted honey is much the best.

You are on the right track, keeping tab of what each colony is doing, and, by breeding from the colony doing the *best work*, you can have in time those poorest colonies doing just as good work as the best.

It was the sections that we had trouble with. Our bees have seldom bothered us much in taking feed from a feeder in the fall. Sometimes they have refused to take it in the spring, but that, I think, was perhaps because they were rather weak.

A very good plan is to give the strong colony that will take the feed a story of empty brood-combs and let them fill them, then draw from these to feed those that need feeding.

What is meant by stimulative feeding, is to feed in such

a way as to induce the queen to lay more than she otherwise would do, by feeding a small quantity each day, or every other day. It is better to have the honey or syrup thin.

But stimulative feeding is a two-edged sword, and may do more harm than good, by inducing the bees to fly in unfavorable weather.

In our locality stimulative feeding is rarely needed, as the queens usually lay as many eggs as the bees can cover. In some localities, especially in Colorado, there may be good weather in the spring so that bees can fly, everything all right for brood-rearing, but there is nothing for the bees to gather, so the queens will not lay as when nectar is coming in. In such cases feeding is a necessity in order to keep the queens laying.

You are indeed using the most "advanced method." Is there anything that is better to feed bees than solid frames of honey? I always feel rich when we have a good supply of full combs on hand.

I have looked up the article by Dr. Peiro. The only instructions are to mash the mulberries to a pulp, and put on the alighting-boards. It is doubtful if the bees will trouble themselves with any kind of fruit-juice when they can get nectar from the flowers.



Mr. Hasty's Afterthoughts

The "Old Reliable" as seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B. Rural, Toledo, Ohio.

MR. SCHOLL AND THOSE BEE-PROBLEMS.

May be good for Mr. Scholl—but bad for we'uns—that he has so unexpectedly flown the Texas coop. The Ohio State University is not much interested to have him settle all those toothsome bee-problems, I fear. Whatever shall we do?

"We never had a little dog
But what he died or run away."

DIDN'T LIKE NATURE'S HIVE.

So when L. M. Gulden had secured one of Nature's hives at his pretty apiary (for contrast), the bees therein "up and died." So ashamed of their not-up-to-date condition that they got cold feet. Pages 21 and 27.

SPACE UNDER SOLID COMBS IN WINTER.

On page 29, Dr. Miller's all right to get his bees in a bunch down below solid combs of honey, when it's a matter of cellar-wintering merely; but I'm an out-door feller, and was thinking of out-door conditions. I have come of late years to think that vacant space below (or unnecessary vacant space anywhere, for that matter) counts heavily against the best success in wintering outdoors. Such space is *cellar*, and shockingly cold cellar at that; and it half forfeits the strongest advantage of outdoor wintering—direct ventilation from perfectly pure and highly ozonized air. In other words, air keeps circulating back and forth between the big, cold space and the warmer, narrow spaces next to the cluster, with the result that pure air from the outside arrives only in an adulterated condition. Or, in still other words—seeing the air next the cluster must be cooled by admixture with colder air from some place, far better the mix be with pure outdoor air than with dead and impure indoor air.

DIFFERENCE IN PERCENTAGE OF MISMATINGS.

So E. W. Diefendorf thinks the lemon-banded Italians and the orange-banded Italians differ in the percentage of queens that will mismate (outside things being equal), the latter making the worse scores. That, if sustained, will offer some aid and comfort to those who think that comparative agility in flight, and the number of wing-strokes per second (on both male and female sides) count heavily in the martial selection. I don't seem to have much to say about it—perhaps—and then again perhaps not. Page 30.

CATCHING THE PRODIGAL SWARMS.

And here's another rich idea: During a season when famine conditions prevail, a large, well-kept apiary attracts

the hungry swarms from yards where there are but few colonies, and they totally neglected. Not much doubt about that. Well, the additional kink is that a few decoy hives posted up on roofs and trees around will take them automatically. William Stolley got six of them in one season. He did well—and wants to hear from the fellow that can beat it. Page 30.

LUMBER PRICES IN TEXAS.

Pass some of those high prices up this way, please! The Texans call lumber high at \$22 per M. Page 31.

LATE SWARMS NORTH AND SOUTH.

Yes, Oct. 31 distances Sept. 22 as record for the lateness of a swarm—or would, except that we can hardly let California, and Texas, and Florida trot in the same class with the Northern States on the Atlantic side of the Rockies.

And A. J. Burns shows that an imprisoned host of robber-bees can sometimes be enlisted and queened and started off on an honest career as a colony. Possibly some of us may have suspected as much before. Page 34.



Doctor Miller's Question Box

Send questions either to the office of the American Bee Journal, or to Dr. C. C. MILLER, Marengo, Ill.

Dr. Miller does not answer Questions by mail.

Two-Pound vs. One-Pound Sections

H. A. Smith, page 126, wants to know what I think about 2-pound sections. They had the field when sections were introduced years ago, but side by side brought 2 cents a pound less than the 1-pounds; so that notwithstanding the less labor in their production they were driven out of the market. It is somewhat doubtful whether they would do any better now.

C. C. M.

Cutting Small Soft-Maple Limbs in Spring for Sap for Bees

I have 30 colonies of bees which I desire to increase. I also have a grove on my farm of about 10,000 soft-maple trees. Now, as soon as the bees begin to fly well in the spring, and in order to build up fast, if I would cut off a small limb of a lot of the trees so that they could work on the sap, which flows profusely, would it help the bees, or would it be a damage to them?

NEBRASKA.

ANSWER.—I don't know, but I think it would be a good thing. There is just a question whether it might not get the bees out on days so cold that the loss from chilled bees would overbalance any good resulting. Neither would the trial one year tell positively what might be done another year. One year there might be nothing but good weather at the time, and the next nothing but chilly, windy and wet. At any rate, I rather think I'd try the experiment, not being in a hurry about it till there seemed a fair prospect of fairly good weather.

To Use or Not to Use Queen-Excluding Zinc?

On page 105 "Pennsylvania" asks regarding excluders: "Would you use bound, unbound, or wood-and-zinc?" We were just congratulating ourselves on seeing your *honest opinion* on a matter we have been interested in, when, by answering the first part of query No. 2, you shut off all the rest, and every subscriber to the paper is made a partaker of the apparent snubbing given by half-answered questions. My present opinion favors a full sheet of queen-excluding zinc, because of the larger surface available for the use of the bees.

ONTARIO.

ANSWER.—I should regret exceedingly to snub any one, even at second-hand, in this department, and I do not mean to leave a question "half-answered" in any case, even if I can do no better than to say I don't know. I think you will absolve me from the charge if you will look again. It is true that there are two questions, and I gave one

answer, but that one answer answers both questions. In order, however, to satisfy you fully, I will now give a categorical answer to each of the questions.

The first question is: "Is it necessary to use queen-excluders with dovetailed hives in producing comb honey?" To that question I answer, No.

The second question is: "Would you use bound, unbound, or wood-and-zinc?" To that question I answer, No.

I now submit whether those two answers were not just as fully understood from the one answer I gave: "I wouldn't use excluders for comb honey."

I can fancy your replying: "Yes, but some may want to know what you would prefer if you used either excluder." Very true, and some might also want to know whether I would use excluders for extracted honey, and several other things might be asked. Now, if you are going to hold me responsible to answer all the questions that some one else might ask, under penalty of being charged with apparently snubbing every subscriber of the paper, don't you think you are giving me a pretty big stint? Bless your heart, my good friend, I don't know enough to answer all the questions now asked, without exposing my ignorance by trying to answer all the questions I can imagine might be asked. You don't want to be too hard on me, do you?

Well, now, seeing it's you, I'm going to answer the question I infer you want answered, even though you haven't directly asked it.

If I were going to work for extracted honey I would use queen-excluders. As to the kind, there are several things to be taken into consideration. The wood-and-zinc keeps in shape better than anything else. The all-zinc has a larger number of perforations, but if it should sag down so as to rest on the top-bars, that would shut off a large number of them from use. In any case, either one has more perforations than needed for free passage of the bees. The wood-and-zinc excluders are rather frail, easily broken, making them in the long run more expensive than the others. So you see there are advantages and disadvantages on both sides. If I were to work for extracted honey I would use wood-and-zinc excluders, because I have 150 of them on hand—barring what have been broken; and if I had them all to buy I don't know which I would use, with some suspicion, however, that it would be the all-zinc.

Now, if I haven't been mind-reader enough to answer all that was in your mind, send on any further questions and I'll do my level best on them.

Shade Protection—Gravel to Keep Down Weeds

1. Would it be practical for me to move my apiary from an orchard to the west side of a grove with no protection but on the east, as it is too close to the road?
2. What would give the quickest protection?
3. Would gravel keep the weeds down around the hives very well?

IOWA.

ANSWERS.—1. Yes, move them in the spring before they get to flying frequently, say at a time when you think they will be confined something like a week before having a flight after removal. Clear off everything at the old place so it will have no resemblance to their old home, and as an additional precaution it will be no harm to set up a board before each entrance, not removing the board until they have had two or three flights.

2. The quickest protection is a shade-board made of any cheap stuff placed over a hive, letting it project over the south side. This for a protection from the heat of the sun on hot days. But it will not be needed until the days do get hot, perhaps along in June, and even then some good bee-keepers think it is better not to have such protection. So good a bee-keeper as E. W. Alexander is cutting away the trees that shade his bees.

If you mean protection against west winds, then the quickest thing is a high, close, board fence. For a growing protection, plant cottonwood, or poplar for quick results.

3. Yes, if deep enough. I don't know just how deep; perhaps 6 inches.

Please Send Us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.

Reports and Experiences

Results of the Past Season

My bees did well the past year. Spring count showed 52 colonies, from which I got 3400 pounds of honey, and increased to 74 colonies.

Palmyra, Mo.

JAMES H. BAKER.

About Half a Crop in 1905

I had about half a crop of honey last year, the season being too wet and cold. I had 20 colonies in the spring, which increased to 36. I took off 1100 pounds of surplus honey, of which 380 pounds was comb honey.

Three Rivers, Mich. W. Z. RUGGLES.

Dampening Sections for Folding—Cutting Section Foundation

I have noticed many times articles in the bee-papers in regard to wetting the back of each joint of sections before using them. I would like to say to all that have had to do that way, put the crate of sections into the cellar 12 to 24 hours before using, and your trouble will vanish like magic.

I will give my way of cutting foundation for surplus sections: Take a piece of $\frac{3}{8}$ -inch surfaced lumber 6 inches wide by 2 feet long. Put on a strip of board $1\frac{1}{2}$ inches wide the full length of one edge of the first piece mentioned, and also across one end. Then take a square and measure off the length of pieces of foundation, marking off for as many pieces as the sheet of foundation will make. Then saw out each mark to a depth of $\frac{3}{8}$ inch clear across the board and through the $1\frac{1}{2}$ -inch strip, which strip should be put on with the projection all on one side. This will serve as a back to put the foundation against. Now get an old steel case-knife and cut it off to about 3 inches long. Then taper the cutting edge of the blade, making a long taper, and grind it down thin, but not sharp, and smooth the whole surface of the blade with a fine whetstone. With this knife and the above-described board a good outfit is secured where-by foundation can be cut perfectly square and without damaging it in the least, if one has a cup of cold water to dip the knife in occasionally. Lay the foundation on the board snug against the projection. On both end and side hold the foundation with the thumb and forefinger straddle of each sawkerf as the knife is drawn through the sawkerf.

C. H. HARLAN.

Mora, Minn., Jan. 15.

Dealing With Queen-Breeders

I sometimes notice articles in the American Bee Journal that I feel should be taken up and given further discussion in order to prevent non-progressive opinions being formed in the minds of the amateurs and others who are its readers. Especially would I like to call attention to the item on page 97, entitled, "Dealing with Some Queen-Breeders." While I have had the same experience as Mr. Smith, still I believe the queen-breeders, as a class, are just as honest as the average business man of to-day, and while one is apt to get the worst of it at times when trying to get orders filled early, or in small lots, yet our experience has been very agreeable and satisfactory. We have purchased from 25 to 150 queens every season for the past 10 of 12 years, and I can assure you that it paid well; in fact, as well as any investment we ever made in the bee-line. I believe it is safe to say that we got back in increased surplus three dollars for every one expended in this way.

Young queens stimulate an apiary and bring results. The apiarist who devotes all his time to the production of honey can seldom afford the time to rear the queens he should have, to obtain the best results; especially in this Northern climate where it is practically im-

possible to do anything in that line early in the season. He can well afford to pay good prices to Southern breeders. We have had our best results with a breeder in Florida, also very good satisfaction from some in Texas.

In conclusion, I feel that the queen-breeder is a necessary accessory to the honey-producer, and should be looked upon with approval by the bee-keeping public.

I wish to speak my appreciation of the American Bee Journal—a fair and independent paper, and of great service to the professional bee-keeper.

Hennepin Co., Minn.

C. L. BROWN.

Improving American-Italian Bees

It's an old story, this improvement of bees for honey-gathering. Now let us get the evidence and see what we have.

J. A. Green, in Gleanings, says: "It does not seem that anything very wonderful has been done." Now, in some number of Gleanings, E. F. Atwater seems to have about the same opinion about our improved bees.

In reference to Root's \$200 queen, if I mistake not, she came direct from Sunny Italy. I might ask what has been done here in America in the way of improving this strain of bees as to honey-gathering? I will give a brief review of my bee-keeping for the last 20 years:

In the spring of 1886 I began bee-keeping with Italian bees, and every season since I have bought Italian queens from Illinois east to the Atlantic, and from New York to Texas. I mean to say I have bought queens from the territory above stated, and by careful count have taken off 26,300 pounds of honey (not a large amount, by the way), $\frac{1}{2}$ of which was comb honey and $\frac{1}{2}$ extracted. Now, in my 20 years of bee-keeping I had one queen that I bought, imported from Italy, that I reared queens from in June, 1904. They proved themselves the most valuable during the season of 1905 of any bees I ever owned. It was an easy matter for those queens to keep three 12-frame Langstroth hives full of bees, brood and honey, and these bees gathered honey according to the amount of bees they had.

The season of 1905 here in northern Indiana was poor. We had a great amount of rain, and I got but 1600 pounds of honey from 54 colonies, which increased to 72.

St. Joseph Co., Ind.

C. A. BUNCH.

Do Bees Move Eggs?

In the report of the Ontario Convention, page 84, is found this question and answer:

"Will bees move eggs?"

"Mr. Alpaugh—'Yes. I had queen-cells built, eggs carried and put into them, and queens reared.' Mr. Holtermann and Mr. Pettit both endorsed this."

An unqualified statement and an unqualified endorsement by three able men! Heretofore writers have expressed their opinions on this subject with hesitation, no one high in leadership committing himself on either side. No case has ever been reported in detail that would satisfy the demands of entomology. Editor Root, who was, one might almost say, born in a bee-hive, and who thinks that bees do move eggs, offers no better proof than that he "has seen a worker carrying something that looked like an egg." More likely a flake of newly-secreted wax. Arguments drawn from the innate jealousy of the queen [Langstroth], or from the ant by analogy [Novice], are plausible but not substantial.

In view of the uncertainty in the teachings on this subject, would it be too much to ask Mr. Alpaugh, or one of his endorsers, to give us the cold facts? The object of this request is not to impeach their truthfulness, but to challenge, in all kindness, the accuracy of their observations.

E. W. DIEFENDORF.

New Lebanon, Mo.

Results of the Season of 1905

My bees are the blacks. By May 20, 1905, I took off one 8-frame extracting super of honey and one 24-pound super of comb honey per colony. By June 20, I took off one 8 frame extracting super and another 24 pound super of comb honey. During the rest of the season they drew out one 8-frame super of comb foundation into full combs, and finished

another 24-pound super of comb honey. These bees are kept in a house-aplary. The others I increased to 8 colonies and sold \$5 worth of honey per colony. I sell my honey at 12 $\frac{1}{2}$ cents per pound. Some bee-keepers claim that 1905 was not a good year for honey here. The bees commenced swarming in this locality about May 13, but I don't think they will swarm this year until the last of May.

My way of stopping robber-bees is to close up the hive of the robbers at night, and in the morning close up the hive-entrance of the one that was being robbed to one bee-space. Then I open the hive-entrance of the robbers and kill all the bees that come out loaded; or else I pick up the colony that is doing the robbing and take it off a mile or two. This is a sure cure.

I have four colonies of bees on the summer stands that have wintered well so far. I have sold some bees, but every time after having sold a colony I caught a swarm coming out of the colony.

My bees work on red clover, pennyroyal, or almost anything. I left a feeder in one hive full of thick sugar syrup. The bees did not seem to want to go in search of anything this winter. They did not unseal any of their honey, so far as I could see. I caught this swarm in October.

L. A. MILLER.

Rosebud, Mo., Jan. 30.

Bees Didn't Do Well—Cellar-Wintering

The past year bees in this locality did not do well. My 9 colonies taken out of cellar in the spring (1 died) increased to 13 (by natural swarming), and gave about 140 sections of honey. I had a swarm issue May 30 which I hived on old combs and saw the queen enter the hive, but 6 weeks later, noticing that there was no work at that colony, I examined and found that there was only a handful of bees left, and no sign of brood, but moths in plenty, and combs nearly spoiled. June 15 I put a super on this colony, when it seemed flourishing finely. Does this happen often?

First swarms usually appear after the middle of June here.

My bees are in the house-cellar facing the center, with no precautions as to light, there being two windows at their back and one at their side but 15 feet away. The hives are placed with their backs to the wall on the south side, with a board partition between the wall and the hives, and stacked 2 or 3 high, as convenient. I leave the bottom-boards on and supers off, entrances 6x $\frac{1}{2}$, and 1 inch auger-holes in the middle of the front just above the portico, which makes a good alighting-board in summer. They wintered well under the same treatment last winter, while two neighbors about $1\frac{1}{2}$ miles from here lost very heavily; one, from 50 colonies put in winter-cases, had 18; the other, of 30 or 33 on the summer stands with corn-stalks as a covering, had 6 very weak ones left. It seems useless to try to winter bees without good protection in this climate. Since Dec. 1 there have been 6 or 7 days that bees could fly with safety—only one day at a time—so they might stand it this year on the summer stands.

The American Bee Journal is the only paper of four taken by the family that I read entirely, every number being a treasure, and very helpful to bee-keepers in general. I think that I can lay all the success that I have yet enjoyed to the instructions found in the American Bee Journal.

HOWARD H. HOUSE.

Richfield Springs, N. Y., Jan. 15.

Bee-Keeping in North Dakota

Last spring I put out of the cellar 7 colonies, and secured over 700 pounds of surplus honey, and increased to 15 and 1 nucleus during the season, all fairly supplied with honey for the winter. I left them on the summer stand until Dec. 1, and had to dig them out of a snowbank from 4 to 6 feet deep. They were all as lively and happy as if it were summertime. This winter is mild for North Dakota, and the bees are keeping up that low hum in the cellar at about 45 degrees above zero.

I have the hives set in wooden trays 2 inches deep, with a wire-screen on one end and a little tin door on the corner, open enough to

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What Dr. Miller Thinks of the Bee-Hive Clock

Busily ticking away, in the room where I am sitting, stands a genuine bee-keeper's clock (please understand that the word "genuine" belongs to the clock and not to the bee-keeper) or, as the legend upon the clock has it, "The Bee-Hive Clock." I don't know

whether the idea of getting up such a clock was conceived in the brain of the Editor of the American Bee Journal, or whether he got it elsewhere, but the wonder is that such a thing was not thought of long before.

Setting aside all idea of its association with the business of a bee-keeper, there is a peculiar appropriateness in having the minutes and the hours "told off" in a case representing the home of the busy little workers. The glance at the clock, with its ceaseless tick, tick, tick, can not fail to remind one that the flying moments must be improved now or be forever lost, and that suggestion is reinforced by the thought of the never ceasing activity of the little denizens of the hive, always busy, busy, working from morn till night and from night till morn, working unselfishly for the generations to come, and literally dying in the harness.

Let us be thankful that the form of the old-fashioned straw hive or skep was adopted, and not that of any modern affair, patented or unpatented. The latter smacks of commercialism, but the former of solid comfort, for no other form of hive has ever been devised that contributes so fully to the comfort and welfare of a colony of bees as does the old-fashioned straw-hive. It appeals, too, to one's artistic sense as can no angular affair of more modern times. As an emblem of industry, artists have always used—probably always will use—the old straw skep.

Thanks, Mr. Editor, for furnishing us a time-keeper so appropriate for all, and especially for bee-keepers. C. C. MILLER.

let the bees out to run around, and closed enough to keep a mouse out. They did pretty well this way last winter.

I hang to that way of making increase that I saw in the American Bee Journal some years ago, viz.: After putting out, I see to keeping them warm, and that they have feed enough, and when they get well filled with brood (I do not shake) I divide them about equally. If I can not see the queen, I move the hive one foot or so to one side and put the other half a foot or so to the other side. I put a board between the hives, standing it out in front, and it seems the bees divide about right. I soon find the half that has no queen, and either introduce a queen or let them rear one themselves, helping them by taking brood from the other. As soon as these two hives are filled with brood, on goes the excluder and a hive on top filled with empty comb or foundation, and in comes the honey. I then look to extracting, having an eye to queen-cells below, and little fear of swarming.

I get some fine queens from these queenless halves by taking a frame with cells and putting it in a nucleus. These often build up to a good colony for wintering or for replacing a queenless colony. I often have 3 nuclei in one divided hive-body.

White and yellow sweet clover are all right as honey-plants. We are well supplied with forage—white clover, basswood, willow, plum, elm, wild-cherry, hawthorn, mustard, corn, raspberries, etc. All that is needed here is to manipulate all right. The local demand for honey is sufficient yet.

I am getting more and more in love with the American Bee Journal. But for it my surplus would be little or nothing. By keeping a close watch on its columns, and adding my own experience, I succeeded even in the past poor year to get over 100 pounds of honey from each colony, spring count.

Hendrum, Minn. R. McCRAID.

Favors a Shorter and Deeper Frame

There comes through the columns of the bee-papers every spring, a kind of wail, especially from the beginners. Their bees died, although there was honey in the hive—not very much, perhaps, but if the bees had been clustered on the little bit there was, they would no doubt have survived until it was

possible to feed them in the spring. Of course, the bees should have been fed in the fall, so there could have been no possible chance of starvation. The beginner knows this, but still he finds it hard to excuse those bees for dying when the honey was there, although out of reach.

Would that honey have been out of reach if it had been directly over the cluster, or nearly so? One pound of feed over the cluster is worth 100 pounds in some other part of the hive, when a cold-snap comes. I have found plenty of honey at one end of a Langstroth hive, and a cluster of dead bees at the other end, when taken out of winter quarters. Would such a state of things have existed if that superfluous length had been added to the depth of the hive, thereby placing the honey, which would have been in that part of the hive, directly over the cluster?

For the man who winters his bees in the cellar, the long Langstroth frame is all that can be desired. It is also a good hive for some men who winter bees out-of-doors. By some men, I mean those who feed their bees so the hives are chock-full in the fall, so they always have feed in easy reach. But for the man who can not attend to his bees as can the specialist, a shorter and deeper hive—one which will bring the bulk of the honey over the cluster—will save him many colonies of bees. Ever since Father Langstroth invented his hive, with its long, narrow frame, it seems to have been preserved as a standard, especially in regard to its length. No doubt many bee-keepers have found fault with its wintering qualities, but when the penalty for changing from regular to odd-sized hives was realized, they were forced to stick to the standard. I find that a hive which is about 3 $\frac{1}{4}$ inches shorter, 2 inches deeper, and about 14 $\frac{1}{4}$ inches wide, winters a colony much better than a standard Langstroth, and with less honey. What honey the bees have is always within reach.

I don't wish it to be understood that I condemn the Langstroth hive for all conditions and circumstances. As I said before, it is a good hive for the specialist bee-keeper, but if this other hive is a good hive for the novice, it surely ought to be a better hive for the specialist, according to the ability of the man using it.

Palermo, Ont.

H. A. SMITH.



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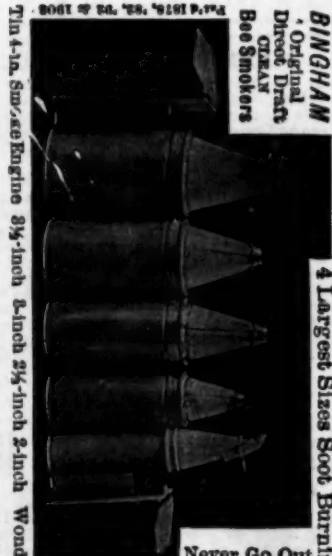
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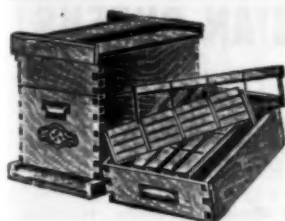
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Honey and Beeswax

CHICAGO, Feb. 7.—The demand is about normal with sufficient stocks to meet all requirements. The best grades of white comb honey bring 14@15c, with off grades at 1@3c less, depending upon color, condition and shape. Extracted, aside from white clover and basswood, (choice grades of which are practically unobtainable), is in ample supply at 6@7½c; amber, 6½@7c, with off grades still lower. Beeswax, 30c. **R. A. BURNETT & CO.**

TOLEDO, Feb. 5.—The market on comb honey at this writing is rather quiet, and prices have weakened somewhat. We are getting for fancy white comb, 14@15c; No. 1, 13@14c. Extracted white clover, in barrels, brings 6½@7½c; in cans, 7½@8½c, although the supply seems to be exhausted throughout the country. Beeswax, 28@30c. **GRIGGS BROS.**

INDIANAPOLIS, Feb. 2.—Fancy white clover comb brings 16c; No. 1, 14c; demand exceeds the supply; fancy white western comb brings 14@15c; amber grades in poor demand at 12c. Best grade of extracted honey brings 8½@9c in 60-pound cans; amber, 6c. Good average beeswax sells here for \$33 per 100 pounds. **WALTER S. POWDER.**

DENVER, Feb. 5.—Owing to the mild weather the demand for honey has not been as good as usual at this time of year. We are quoting strictly No. 1 white alfalfa comb honey at \$3.35 to \$3.75 per case of 24 sections; off grade and light amber at \$3 to \$3.30. White extracted alfalfa in 60-pound cans, 7½@8½c; light amber, 6½@7½c. Beeswax, 24c for clean yellow. **THE COLO. HONEY-PRODUCERS' ASSN.**

NEW YORK, Feb. 19.—The demand is fairly good for better grades of white, and while the near by crop is fairly well cleaned up, new arrivals are now coming in from Cuba, besides several cars have been shipped on from California. We quote fancy white at 15c; No. 1, 13@14c; No. 2, 12c; amber, 11c; buckwheat, 10@11c. Extracted in fairly good demand, especially California, of which there is abundant supply. We quote white sage, 6½@7½c; light

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For prices, refer to my catalog, page 29.

C. H. W. WEBER CINCINNATI OHIO

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

amber at 6@7c, according to quantity; buckwheat at 6c per pound; Southern at 50@60c per gallon, according to quality. Beeswax steady at 29@31c. **HILDRETH & SEGELKEN.**

CINCINNATI, Jan. 20.—The honey market is quiet. We do not offer white clover extracted honey on account of its scarcity; instead offer a fancy water-white honey, in 60-lb. cans, 2 in a crate, at 7½@8½c; fancy light amber, 7½c; other grades of amber in barrels at 5½@6½c, according to the quality. Fancy comb honey, 16½c.

(Bee-keepers, please observe the above are our selling prices of honey, not what we are paying.)

Beeswax, 30c, delivered here, for the choice, bright yellow grade.

THE FRED W. MUTH CO.

KANSAS CITY, Jan. 22.—The market here on honey is very dull now, as it always is this time of year; fancy white is selling at \$3.00 per case; 24 section and amber is selling at \$2.75. Extracted, 5½@6c. Beeswax, 25c per pound. **C. C. CLEMONS & CO.**

CINCINNATI, Jan. 23.—The nice weather holds back the demand for comb honey. Crops seem to be exceedingly short and producers in the West keep the prices high. We quote as follows: Fancy water-white and No. 1 white clover, 14@16c; No. 2, 12@14c. Extracted seems to be more plentiful, and we quote same in barrels, 5½@5¾c; in cans, ¼c more; white clover, 7@8c. Beeswax, 28@30c. **C. H. W. WEBER.**

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Look for the brand. Send for Catalog to-day, if you haven't one.

There are a score of our agents besides ourselves who can furnish you with **LEWIS' GOODS** at factory prices.

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